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## ***Hurricane coverage:***

### **1 — Harvey causes chemical companies to release 1 million pounds of extra air pollutants, Texas Tribune, 9/4/2017**

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### **2 — Residents concerned about flooding at Superfund sites in wake of Harvey, CBS News, 9/4/2017**

<https://www.cbsnews.com/news/superfund-sites-residents-concerned-wake-of-harvey/>

More than a week after Harvey raked across southeast Texas, drone footage shows the floodwaters still surrounding the San Jacinto Superfund site -- where toxic dioxins from an old paper plant could have leaked.

### **3 — Residents return around Arkema plant, told to drink bottled water, ABC Houston, 9/4/2017**

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Arkema gave notice of the lifted evacuation order early Monday morning after consulting with officials monitoring the scene. For now, though, residents are also advised to use protective clothing and drink bottled water until further notice.

### **4 — Air quality remains concern in aftermath of Harvey, KPRC, 9/4/2017**

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The Environmental Protection Agency is circling back on its monitoring of the quality of Houston's air after releasing a statement Sunday saying that "local residents should not be concerned about air quality issues related to the effects of the storm."

### **5 — Environmental concerns persist across Harvey-ravaged Texas cities. Here's what you should know today., Texas Tribune, 9/4/2017**

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As efforts to rebuild have slowly begun in areas hit hard by Hurricane Harvey, officials continue to warn of lingering environmental hazards, including the health risks posed by receding floodwater.

### **6 — Houston's Environmental Threats Come Into Focus, Wall Street Journal, 9/4/2017**

<https://www.wsj.com/articles/houstons-environmental-threats-come-into-focus-1504554072>

Water is subsiding in flooded neighborhoods, the mayor is insisting Houston "is open for business," and shelters are emptying out, but Texans returning to flood-damaged homes face plenty of obstacles: the threat of toxic pollutants in the air and drinking water, and even hungry, dislocated animals seeking shelter.

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<http://www.houstonchronicle.com/news/texas/article/Harvey-began-with-raging-winds-but-its-legacy-12172753.php>  
Hurricane Harvey began with raging winds, but its legacy will be water. Seemingly endless, relentlessly insidious water — a staggering 40 inches or more that swamped parts of Houston in just five days. The water — and the muck and mold that follow — will create misery that will linger for years and likely cost tens of billions of dollars all told.

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Beaumont, Texas, is among the state's cities that were hardest hit by Hurricane Harvey. Beaumont Police Department Chief James Singletary gives an update on restoring running water to residents and how the storm has affected the community.

**9 — EDITORIAL: Time to clean up the San Jacinto waste pits, Houston Chronicle, 9/4/17**

<http://www.chron.com/opinion/editorials/article/Time-to-clean-up-the-San-Jacinto-waste-pits-12172298.php>

Nowhere is the risk from flooding more worrisome than the San Jacinto waste pits, which sit between the communities of Highlands and Channelview. One of the San Jacinto waste pits, covered by a temporary armored cap, was partially submerged in the river even before Hurricane Harvey. Now they're totally engulfed.

***Other news:***

**10— Judge Won't Let Texas and EPA Delay Air Cleanup Again, Courthouse News Service, 9/4/17**

<http://www.houstonchronicle.com/news/texas/article/Harvey-began-with-raging-winds-but-its-legacy-12172753.php>

The Trump administration cannot put off a plan to curb air pollution from Texas power plants until 2019, a federal judge ruled, refusing to further delay a process that's dragged on for nearly a decade.

**11— EPA eyes limits for agricultural chemical linked to crop damage, Reuters, 9/5/17**

<https://www.reuters.com/article/us-usa-pesticides-epa-exclusive/exclusive-epa-eyes-limits-for-agricultural-chemical-linked-to-crop-damage-idUSKCN1BG1GT>

The U.S. environmental agency is considering banning sprayings of the agricultural herbicide dicamba after a set deadline next year, according to state officials advising the agency on its response to crop damage linked to the weed killer.

**12— OPINION: Don't delay methane regulations, Albuquerque Journal, 9/3/17**

<https://www.abqjournal.com/1057727/dont-delay-methane-regulations.html>

With the ongoing expansion of drilling in our state these necessary, common-sense and low-cost rules are more crucial than ever.

**13— As Houston grew, officials ignored 'once-in-a-lifetime' chance to spare thousands from flooding, Dallas Morning News, 9/5/17**

<https://www.dallasnews.com/news/harvey/2017/09/05/houston-grew-officials-ignored-lifetime-chance-spare-thousands-flooding>

In a report dated May 1996, engineers for the Harris County Flood Control District concluded the area's reservoir system was severely insufficient and imperiled thousands of properties. The report's authors proposed a \$400 million fix: constructing a conduit - an underground channel - that would carry water out of the reservoirs and into the Houston Ship Channel more quickly.

**14— Irma strengthens to Category 5 storm as it nears Caribbean, AP, 9/5/17**

<http://www.arkansasonline.com/news/2017/sep/05/irma-strengthens-category-5-storm-it-nears-caribbe/?f=latest>

Hurricane Irma strengthened into a dangerous Category 5 storm Tuesday as it roared toward the northeast Caribbean on a path that could take it to the United States.

**15— Small oil spill in Mississippi River near Braithwaite, New Orleans Times-Picayune, 9/5/17**

[http://www.nola.com/environment/index.ssf/2017/09/small\\_oil\\_spill\\_in\\_mississippi.html](http://www.nola.com/environment/index.ssf/2017/09/small_oil_spill_in_mississippi.html)

Between 10 and 20 barrels of high sulphur fuel oil was spilled into the Mississippi River late Sunday (Sept. 3), causing a strong odor of diesel in the Belle Chasse and Braithwaite areas overnight, according the officials with Plaquemines Parish.

**16— False River set for drawdown, more dredging, in bid to restore oxbow lake's health, Baton Rouge Advocate, 9/2/17**

[http://www.theadvocate.com/baton\\_rouge/news/communities/westside/article\\_c2803596-8f28-11e7-80b1-2fec94c4ea63.html](http://www.theadvocate.com/baton_rouge/news/communities/westside/article_c2803596-8f28-11e7-80b1-2fec94c4ea63.html)

Still struggling to restore the health of ailing False River, the Pointe Coupee Parish Police Jury is about to draw down the water level of the oxbow lake for the third time for more dredging.

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Texas oil companies have begun repairing seven flood-damaged refineries, the Energy Department said Sunday, marking the first step in a slow recovery after Hurricane Harvey swamped facilities that make about a quarter of the nation's gasoline.

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# Harvey causes chemical companies to release 1 million pounds of extra air pollutants

Oil refineries and chemical plants across the Texas Gulf Coast released more than 1 million pounds of dangerous air pollutants in the week after Harvey struck, according to filings.

BY STEVEN MUFSON, THE WASHINGTON POST    SEPT. 4, 2017    12 HOURS AGO



Satellite view of the Arkema SA chemical plant in Crosby, Texas.

Oil refineries and chemical plants across the Texas Gulf Coast released more than 1 million pounds of dangerous air pollutants in the week after Harvey struck, according to public regulatory filings aggregated by the Center for Biological Diversity.

While attention has zeroed in on the crisis at the Arkema chemical plant in Crosby, other flaring, leaks and chemical discharges triggered by Harvey.

Emissions have already exceeded permitted levels, after floating rooftops sank on oil storage tanks, chemical storage tanks overflowed with rainwater, and broken valves and shutdown procedures triggered flaring at refineries.

The chemicals released in the week after Harvey made landfall, including benzene, 1,3-butadiene, hexane, hydrogen sulfide, sulfur dioxide, toluene and xylene.

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All seven chemicals are toxic air pollutants documented to harm human health; several cause cancer. Other emissions would bring the total to more than 5 million pounds, the Center for Biological Diversity said.

“Our general concern is the fact that these are relatively unseen environmental threats that don’t normally get recognized,” said Elena Craft, a toxicologist at the Environmental Defense Fund.

Further damage and emissions across the region could be uncovered in the coming weeks as floodwaters recede, and chemical safety experts warned that restarting plants could carry as many dangers as the shutdowns.

“We are not out of the woods yet, not the entire industry,” said M. Sam Mannan, a professor of chemical engineering at Texas A&M University and director of an institute that studies safety procedures in chemical factories.

In addition, winding rivers overflowed and washed over some of the waste pits and drilling pads at shale gas and shale oil drilling sites in the Eagle Ford play in Central Texas, according to satellite imagery collected by Sky Truth, a nonprofit group that monitors the environment. The extent of the damage was not clear.

“It’s unsafe and unacceptable for the petroleum industry to be releasing these massive quantities of air pollutants when storms hit,” said Shaye Wolf, climate science director of the Center for Biological Diversity. She added that the companies could do more to limit flaring and leaks. “That shouldn’t be common industry practice,” she said.

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Companies have two weeks to submit filings to the Texas Commission on Environmental Quality so those figures could increase substantially. But the filings so far give a good picture of some of the problems.

The most common problem in oil refineries has been floating rooftops on storage tanks. Because petroleum is flammable, open space in a tank would collect dangerous vapors. So the oil industry storage tanks have round lid-like rooftops that rise and fall with the level of liquid in the tanks. With heavy rains, many were damaged and sank from the weight, leaving crude oil or petroleum products in the open air emitting fumes. In some cases, they have caused spills too.

Rooftops sank at four tanks at the Pasadena products terminal of Phillips 66. Three sank at the Pasadena terminal of Kinder Morgan, a pipeline company. Two were damaged at Shell's Deer Park refinery. One each sank at Valero Energy Partners' Houston terminal, Marathon's Texas City plant and ExxonMobil's Baytown refinery.

Shell said one leaky tank, discovered during cleanup operations, allowed oil to run out into a surrounding berm. "The leak has been isolated, and we're in the process of cleaning it up," said Shell spokeswoman Kimberly Windon, who added that there was "no offsite impact."

Flooding has posed other challenges. For a week, BASF, the second largest producer of chemical products in North America, has been struggling to contain rainfall at its Beaumont Agro plant, according to BASF's filings with the Texas Commission on Environmental Quality. The plant produces pesticides, herbicides and insecticides.

The company started trucking waste water off the site the week before landfall in an attempt to maximize water storage capacity. Then, unable to contain contaminated storm water and process waste water, the company shut down operations on Aug. 27 and brought in temporary water storage capacity. Nonetheless, the tanks overflowed, spilling chemicals into a diked containment area. The containment area then overflowed to the surrounding ground.

Roberto Nelson, BASF's senior manager for community relations, said a test of leaking waste water on Aug. 29 "indicated there were trace amounts of nonhazardous process chemicals in the discharge water." He added that the overflow stopped on Aug. 31.



At ExxonMobil's Beaumont oil refinery, oil flowed over a 10-foot levee and spilled onto a nearby county road, due to the rising Neches River, an ExxonMobil spokeswoman told the local newspaper, the Beaumont Enterprise. A different spokeswoman, Suann Guthrie said the company was "closely monitoring" and "taking steps" to contain two sheens.

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Oil and chemical companies have also been flaring large amounts of gases, beyond levels ordinarily permitted by the Environmental Protection Agency or TCEQ.

On Sept. 2, the TPC Group said in a [TCEQ filing](#) that it was working to control the source of gases being flared at its Port Neches facility. It has already emitted an estimated 1,000 pounds of carbon monoxide and 1,000 pounds of nitrogen oxides, well beyond the state's permitted levels. Nitrogen dioxide is an air pollutant by itself and reacts in the atmosphere to form ozone. It also contributes to breathing problems and acid rain.

Huntsman Petrochemical on Sept. 2 reported it had flared an estimated 1,000 pounds of methyl tert-butyl ether, used as an oxygenate in gasoline and regulated in California. The flaring exceeded the Texas limit of 0.04 pounds an hour for the plant.

Total said in a filing Friday that its petrochemical refinery in Port Arthur had no power and over a 48-hour period had flared half a dozen chemicals, emitting sulfur dioxide in one flare that was 50 times greater than the regulatory limit.

"A facility that shuts down may employ flaring of excess gasses that cannot be processed," Cal Dooley, president of the American Chemistry Council, said in a statement Thursday. "Flaring is an approved way to safely relieve pressure during a unit shutdown and is considered an industry 'best practice.' These controlled releases are done with the permission of state and federal regulatory authorities."

Texas is the nation's largest producer of chemicals, with \$129 billion in shipments and 79,000 employees, according to Dooley's group.

The Environmental Protection Agency on Saturday reassured residents about health concerns. Yet the city of Houston registered up to 15,000 parts per billion of smog-forming volatile organic compounds in and around the Valero refinery in east Houston's Manchester neighborhood, as well as at other refineries in the region. These concentrations are at least 10 times higher than health officials deem safe, the nonprofit group EDF said in a statement.

The EDF's Craft said "EPA said inaccurately and inappropriately that residents should not be concerned about the air quality around Houston." The Houston area was under alert for ground-level ozone, a lung-damaging air pollutant, for the fourth day in a row, according to the EPA's Air Now Web site.

Mannan, the chemical engineer at Texas A&M, last year wrote a study ranking Houston-area facilities by their potential to cause harm to the public during a disaster. He said restarting production at dozens of waterlogged plants poses enormous risks for workers and the public.

"Additional events could happen because, if you think about it, a lot of these tanks got submerged in water and a tremendous amount of force is created in 40 feet of water. It can move the tanks around or deform them," he said.

"Every piece of equipment, every tank, has been battered by the flooding," Mannan said. "You have to go through and check every piece of equipment. A lot of hard work is still left, and a lot of potential for incidents is still there."

The Chemical Safety and Hazard Investigation Board on Friday issued a "safety alert" urging oil and chemical facilities to take special precautions when restarting after Harvey.

"Restarting a refinery poses a significant safety risk," said CSB chair Vanessa Allen Sutherland.

*Aaron C. Davis contributed to this article.*

*Disclosure: The Environmental Defense Fund, Texas A&M University and ExxonMobil have been financial supporters of The Texas Tribune. A complete list of Tribune Donors and sponsors is available [here](#).*

### **Read related Tribune coverage:**

- ExxonMobil acknowledged Tuesday that Hurricane Harvey damaged two of its refineries, causing the release of hazardous pollutants. [[Full story](#)]
- Texas industrial polluters rarely face sanctions when they spew noxious chemicals into the air during malfunctions and other unplanned incidents, exceeding the emission limits of their state-issued air permits. [[Full story](#)]
- Environment Texas described the fine against the world's largest oil company as the "largest penalty resulting from a citizen suit in U.S. history." [[Full story](#)]
- Here's what local leaders could have done to protect the Houston region from Harvey-related flooding — and what they must do to prevent such disasters in the future. [[Full story](#)]

# Residents concerned about flooding at Superfund sites in wake of Harvey

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**HOUSTON** -- More than a week after Harvey raked across southeast Texas, drone footage shows the floodwaters still surrounding the San Jacinto Superfund site -- where toxic dioxins from an old paper plant could have leaked.

"Most likely we will have to take some samples at this site," said the Environmental Protection Agency's Sam Coleman.



Sam Coleman CBS NEWS

Of the 41 Superfund sites -- places storing sulfuric acid, heavy metals and waste oils -- that were in the storm's path, 13 were flooded. And with the waters receding, workers were finally able to see several locations up close.

"You can see some of the debris and other things. It's still quite muddy," Coleman said.

He says the San Jacinto River waste pits will require further inspection, especially the protective cap that prevents any seepage.

"We have a team that's already out looking at the cap area to see if there's any damage," he said.

That worries Sandra Carrasco, a 28-year-old mother of two, who lives half a mile from the Superfund site.

She returned home last week after 10 feet of water destroyed her home. She's been cleaning up ever since.

"I know the water is probably pretty bad -- a lot of bacteria, a lot of dangerous, hazardous, touching stuff, but I mean we have to do what we have to do," Carrasco said.



Sandra Carrasco, left, cleans up her flooded home. **CBS NEWS**

She says no one from the EPA or any other government agency has talked to them about the health risks posed by hazardous waste.

The EPA plans to test the water and soil near the San Jacinto Superfund site, but they haven't said when they will conduct those tests. Residents hope it happens soon.

# Residents return around Arkema plant, told to drink bottled water

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Questions are rising about the safety of homes near the Arkema plant. (KTRK)

Monday, September 04, 2017 05:13PM

**CROSBY, Texas (KTRK) --** People who live in a 1.5-mile evacuation zone around a Crosby chemical plant are being allowed to return to their homes after the facility was under the threat of an explosion due to flooding from Harvey.

Arkema gave notice of the lifted evacuation order early Monday morning after consulting with officials monitoring the scene. For now, though, residents are also advised to use protective clothing and drink bottled water until further notice.

Arkema

Ar...

Follow

Arkema Inc. Crosby  
update 1.5 Mile  
Evacuation Zone Lifted  
for Area Surrounding  
Arkema Crosby Facility -

more info  
at [ark.ma/crosbystatus](http://ark.ma/crosbystatus)  
1:46 AM - Sep 4, 2017  
3 10 11

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Arkema officials discuss issues at Crosby plant.

"The Crosby Fire Department and unified command has determined it is safe for residents to return to their homes. The 1.5-mile evacuation zone around the Arkema Inc. facility has been lifted and is no longer in effect," the company said in a news release.

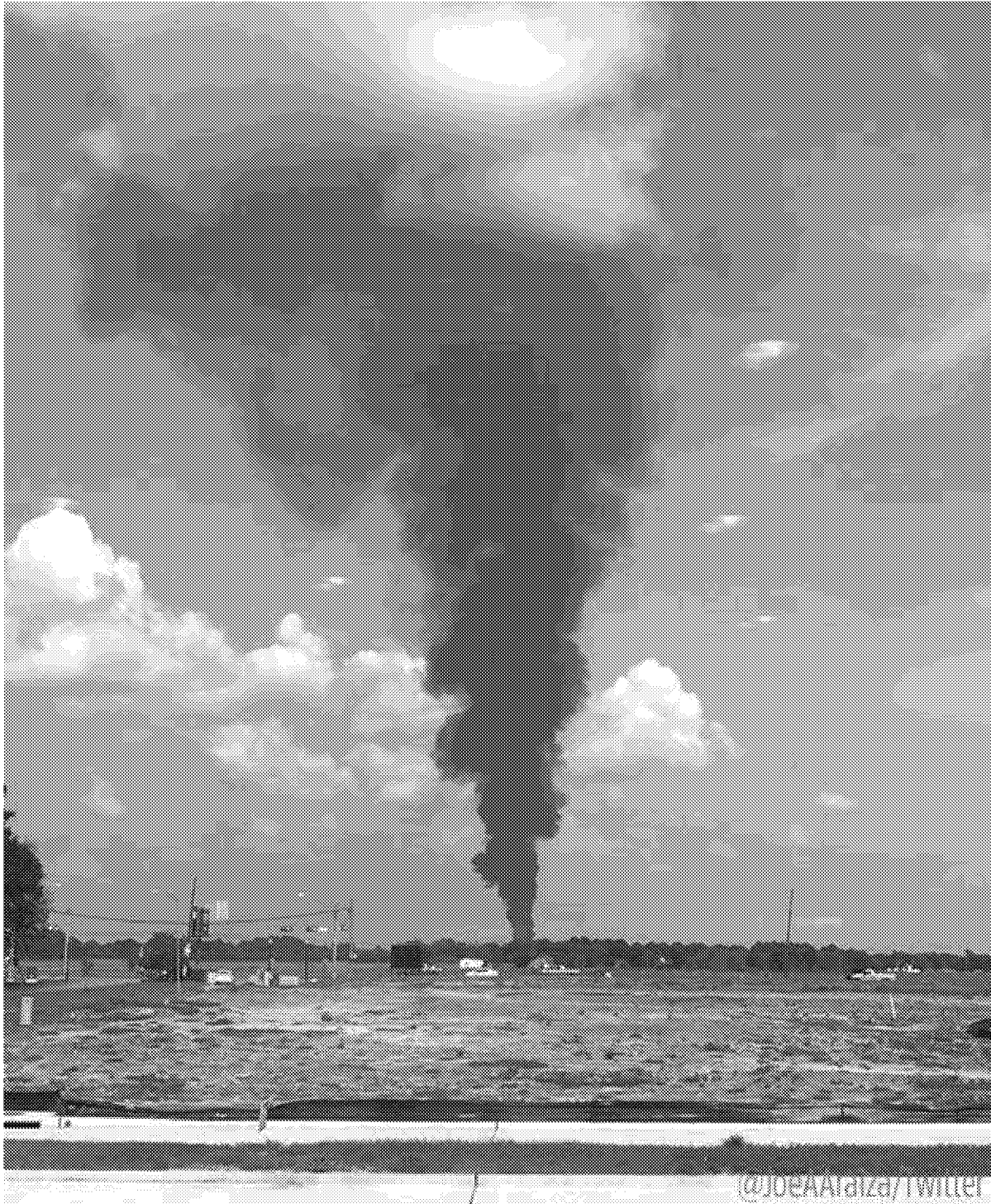
Arkema added the perimeter of the site is secured.

The plant was in danger of a large explosion due to flooding from Harvey. The plant took on fires and smaller explosions since late last week.

Residents near the plant were ordered out of their homes for what amounted to six days. On Sunday, the company decided to ignite the remaining combustible containers rather than wait for them to explode on their own.

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Arkema ignited the remaining combustible containers in a controlled burn.



@JoeAAraiza/Twitter

Arkema plant from 5 miles

away. (@JoeAAraiza/Twitter)

"In a proactive approach, to minimize the impacts to the community by the Arkema Inc. incident, a decision was made by Arkema Inc. in coordination with unified command to take proactive measures to initiate ignition of the remaining trailers through controlled means," Arkema said in a press release Sunday. "These measures do not pose any additional risk to the community."



De...

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Breaking- smoke one more coming from Arkema plant in Crosby- said to have been proactively ignited by company #abc13

4:33 PM - Sep 3, 2017

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35

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By Sunday evening, the containers had largely burned themselves out, according to Arkema.

Two of the nine containers filled with organic peroxides produced at the plant exploded last Friday, sending thick, black smoke into the air. It was visible for miles and thick enough to block the sun for anyone close enough to be under it.

Each container held 500,000 pounds of highly flammable materials inside. Sources had



told ABC News that Arkema had expected the remaining container to explode over the weekend.

The ordeal has put a spotlight on plants like this one, especially for neighbors who had to leave everything behind, including cattle and horses, with no information about how long the evacuation would last.

When asked if they could return to feed the animals, they were told it was simply too dangerous to the evacuation zone. Airplanes and helicopters were being kept away as well.

Throughout the week, officials with the company have suggested the smoke from the fire isn't toxic. Sheriff Ed Gonzalez likened the effects to that of a campfire.

**RELATED: Why wasn't more done to prevent flooding from taking out critical systems at plant that sits in floodplain?**

One first responder who was overcome by the smoke Thursday told ABC13 Investigates that they've been feeling the effects since day one and they are "still quite painful." They described pain in their eyes and throat and could barely speak because of the throat irritation.

At least eighteen people have been taken to hospitals so far, all complaining of problems relating to the smoke.

The EPA says it is continuing to monitor the smoke and air quality near the facility.

Crosby's Arkema plant, inundated with water, wasn't the only site to flood.

The Associated Press surveyed seven Superfund sites in and around Houston during the flooding. All had been inundated with water, in some cases many feet deep.

On Saturday, hours after the AP published its first report, the EPA said it reviewed aerial imagery confirming that 13 of the 41 Superfund sites in Texas were flooded by Harvey

and were "experiencing possible damage" due to the storm.

The statement confirmed the AP's reporting that the EPA had not yet been able to physically visit the Houston-area sites, saying the sites had "not been accessible by response personnel." EPA staff checked on two Superfund sites in Corpus Christi on Thursday and found no significant damage.

AP journalists used a boat to document the condition of one flooded Houston-area Superfund site, but were able to access others with a vehicle or on foot. The EPA did not respond to questions about why its personnel had not yet been able to do so.

In at least one of Arkema's hazard mitigation plans filed with the federal government, plant officials acknowledged that flooding is a risk. The site sits in a FEMA "high-risk" floodplain that has flooded in the past, leading to a power failure. That time, the site only had six inches of water, a former plant worker said.

In that 2006 incident, strikingly similar to the ongoing incident, the plant flooded, lost power and materials ignited inside a warehouse.

In one of the several written violations over the years, the company was fined by the Texas Commission on Environmental Quality. There is no indication that the company made any changes in its backup systems in response.

Richard Renner, the company's CEO, told ABC13 Investigates he wasn't aware of the incident in 2006 and that they didn't anticipate six feet of water in the most recent flooding incident.

Renner insists the plant had multiple layers of backups in place at the time of the flooding. They all failed. When pressed about whether backup generators had been elevated as to not be inundated with water, plant officials said they didn't know.

A safety official with the plant this time around acknowledged they hadn't done enough to prevent the problems.

"Clearly that wasn't enough," said Arkema safety expert Darryl Roberts. "Clearly, as we go forward we will do something different."

As the company contemplates a new plan, residents who are waiting to come home are

hoping there's a home left when they get back.

"I'm worried about what's going to be left there when I get back," evacuee Phil Mincey said.

# Air quality remains concern in aftermath of Harvey

## Houston area under alert for ground-level ozone, a lung-damaging air pollutant

By Dawn Jorgenson - Web - News Editor

Posted: 8:07 PM, September 04, 2017

Updated: 8:17 PM, September 04, 2017

0 Join the conversation

HOUSTON - The Environmental Protection Agency is circling back on its monitoring of the quality of Houston's air after releasing a statement Sunday saying that "local residents should not be concerned about air quality issues related to the effects of the storm."

Even as the statement was released, the agency's AIRNow website showed the Houston area was under alert for ground-level ozone, a lung-damaging air pollutant, for a fourth day in a row.

"EPA said inaccurately and inappropriately that residents should not be concerned about the air quality around Houston," the agency said in a statement Monday afternoon. "Although air quality monitoring remains limited after the storm, we are seeing high levels of ozone across the region, as well as high levels of air toxics in fence-line communities."

Elena Craft, a senior health scientist, said Houston has measurements of up to 15,000 parts per billion of smog-forming volatile organic compounds in and around the Valero refinery in East Houston's Manchester neighborhood, as well as other refineries in the region. She said the concentrations are at least 10 times higher than health officials deem safe.

The agency said the shutdowns and startups of oil refineries and chemical plants and Harvey-related damage have caused the release of more than 4 million pounds of hazardous pollutants, including ones that contribute to the formation of ozone.

"We can expect more air pollution as facilities reboot over the next month. Houston residents deserve an EPA that is thorough and precautionary in protecting the health of those in risk. This is a critical time for residents to pay attention to air quality as many people are working outside for long hours to clean up their homes and neighborhoods. Please stay vigilant."

# Environmental concerns persist across Harvey-ravaged Texas cities. Here's what you should know today.

As efforts to rebuild have slowly begun in areas hit hard by Hurricane Harvey, officials continue to warn of lingering environmental hazards, including the health risks posed by receding floodwater.

BY SHANNON NAJMABADI   SEPT. 4, 2017   UPDATED: 17 HOURS AGO



Aerial view of the Arkema chemical plant in Crosby, Texas.

Arkema Group Facebook page

As efforts to rebuild have slowly begun in areas hit hard by Hurricane Harvey, officials

continue to warn of lingering environmental hazards, including the health risks posed by

In a news release Sunday night, the Texas Commission on Environmental Quality cautioned that floodwaters can contain bacteria and contaminants, and conceal downed power lines, large objects and animals. Gov. Greg Abbott gave a similar warning in a Sunday interview with CNN's "State of the Union," saying, "These waters are filled both with chemicals [and] waste, things like that, that can pose real health hazards." He referenced a "multitude of dangers to public health because of the flooding waters."

The U.S. Environmental Protection Agency has yet to access 11 ultra-polluted Superfund sites damaged by the storm, raising concerns about the spread of toxins.

Thousands of people are still without drinking water, including some of the 120,000 residents of Beaumont – many of whom have queued in long lines for bottled water. The TCEQ, in its release, said 188 water systems in the state have boil-water notices, and 37 others have been shut down. Nearly 85,000 homes and businesses were still without power Sunday, Reuters reported.

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Over 400 wastewater treatment plants are also not fully operational, and wastewater from some facilities has spilled due to flooding, according to the TCEQ release. The agency said it is "actively working to monitor facilities that have reported spills, conduct outreach and provide technical guidance to all other wastewater facilities in flood-impacted areas."

And in Crosby, a 1.5 mile evacuation zone that's been in place since Tuesday around an Arkema Inc. facility was lifted overnight. With little notice, the company exploded its six remaining chemical containers Sunday in what was described by officials as a "controlled burn" and a "proactive approach to minimize the impacts to the community." The company had initially said it would not destroy the remaining chemicals after flood-related damage caused a series of explosions at the facility. The Houston Chronicle reported that notice wasn't given until after the ignition operations had already begun on Sunday.

At a news conference Monday morning, representatives for Arkema said soot from the ignition operations was being tested and that there was no expected impact on the area's water supply. They confirmed that five of the company's facilities in the Gulf Coast had

been impacted by the storm, though not as badly as the Crosby plant, and could not say when the Crosby facility would reopen.

Local authorities advised residents returning to homes within the evacuation zone to drink bottled water and wear surgical masks, closed-toe shoes and gloves as a precautionary measure. In a [news release](#), the Harris County Public Health Department said the same recommendation is given to those returning to flooded homes.

## Swift Federal Funding Promised

U.S. House Majority Leader Kevin McCarthy paid a visit Monday afternoon to Houston, where he announced the House will vote Wednesday morning on an initial relief package for Harvey victims. McCarthy, a California Republican, made the announcement at a news conference at the NRG Center, which is being used as a shelter.

"It won't be the only relief package we vote on," McCarthy said, flanked by members of the Texas congressional delegation. "What we want to do is make sure FEMA has the money going forward as the cities and the counties assess the damage."

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Abbott, McCarthy, U.S. Sen. [John Cornyn](#), and U.S. Rep. [Michael McCaul](#), R-Austin, met Sunday, and the congressional leaders insisted then too that action would be swiftly taken to pass the funding measure, according to a [release](#) after their meeting.

## Recovery Efforts Continue

Officials say Harvey has caused at least 60 deaths, many from drowning and indirect effects of the storm, the Associated Press reported Monday.

In a conference call, an officer with the Federal Emergency Management Agency said efforts had shifted from life-saving to recovery. John Long, the Deputy Federal Coordinating Officer, said 550,000 families had registered for a FEMA assistance program and that more than 16,000 were staying in hotels as part of a transitional shelter program.

On Monday night, FEMA granted Abbott's request for the agency to provide loans that will help Texas cities rebuild after the storm.

“The quick and focused work of our federal partners in response to Hurricane Harvey has been essential to the recovery in Texas,” Abbott said in a [statement](#).

The Texas Department of Criminal Justice [repopulated](#) two Richmond prisons Monday, after the facilities were evacuated last week amid flooding from the storm. About 1,400 inmates were returned to the all-male Jester 3 and Vance Units.

Three other prisons, housing some 4,500 male inmates among them, remain evacuated. In an email Monday, the TDCJ said the Ramsey, Stringfellow and Terrell Units will continued to be assessed and, once safe, will also be repopulated.

The water supply at several federal and state prisons in Beaumont was impacted by flooding, the [Chronicle](#) wrote Monday. Correctional officers there were also reportedly unable to cross the Neches River to get to work.

*Patrick Svitek contributed to this report.*

### Read related Tribune coverage:

- President Donald Trump returned to Texas on Saturday to check in on the Hurricane Harvey recovery effort and meet with victims of the storm that ravaged southeast Texas. [\[Full story\]](#)
- Floodwaters have ebbed, but many parts of the state still face environmental hazards and other risks in the aftermath of Hurricane Harvey. [\[Full story\]](#)
- Gov. Greg Abbott said Friday another special session of the Texas Legislature won't be necessary to deal with the response to Hurricane Harvey. The Legislature isn't scheduled to meet again until January 2019. [\[Full story\]](#)

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U.S.

# Houston's Environmental Threats Come Into Focus

As Harvey's flooding recedes, risk of toxic pollutants tests health inspectors



Jesus Ramirez removed the wood floors from his home damaged by floodwaters Monday in Houston. PHOTO: DAVID J. PHILLIP/ASSOCIATED PRESS

*By Douglas Belkin and Tawnell D. Hobbs*

Updated Sept. 4, 2017 6:17 p.m. ET

HOUSTON—Water is subsiding in flooded neighborhoods, the mayor is insisting Houston “is open for business,” and shelters are emptying out, but Texans returning to flood-damaged homes face plenty of obstacles: the threat of toxic pollutants in the air and drinking water, and even hungry, dislocated animals seeking shelter.

On Monday, authorities lifted an evacuation order in Crosby, site of the Arkema Inc. chemical plant about 25 miles northeast of Houston. Containers of the chemicals, which are unstable if not kept refrigerated, started igniting on Thursday after power outages cut off cooling systems. On Monday, the company said the Crosby Fire Department had lifted a 1.5-mile evacuation zone around the plant, allowing neighbors to return to their homes.

But concerns about the long-term environmental damage to the area remain high, and the Houston Health Department is overwhelmed. The two employees who routinely test the city’s waterways aren’t enough to quickly monitor the storm’s effects across Houston’s vast network of bayous, said Loren Raun, chief environmental science officer for the health department.

“It’s too big of a problem,” Ms. Raun said. “We really need to be sampling everywhere.”

Floodwaters also have inundated at least five toxic-waste Superfund sites near Houston, and some may be damaged, though Environmental Protection Agency officials have yet to assess the full extent of what occurred.

One of Ms. Raun's chief concerns is the threat of toxic pollutants from Houston's runoff reaching downstream industries and ecosystems, contaminating the soil and entering the air through evaporation.

The city's main waterway, the Buffalo Bayou, channels runoff from the surrounding 102 square miles into the Houston Shipping Channel. Those waters eventually make their way to the Gulf of Mexico, she said.

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That is why Ms. Raun emailed EPA officials Friday to request help taking and testing water samples near Superfund locations. An EPA official replied Friday to say he had forwarded her request to the agency's Regional Emergency Operations Center.

In the meantime, Houston Health Department air-inspection teams will begin to fan out Tuesday to monitor air quality around the city's petroleum and chemical manufacturers, targeting roughly 100 of the largest locations first, according to Donald Richner, senior project manager for the bureau

of pollution control and prevention within the health department's environmental division.

"We'll start with them, because when they have a problem, it's usually bigger than anyone else's," Mr. Richner said.

Texas Gov. Greg Abbott told CNN the EPA is working on some of the hazardous sites already, but "they have restraints on their ability to check out some of them just simply because of the water."

Meanwhile, repairs continued on the water-treatment plant in Beaumont, about 85 miles from Houston, which failed after the swollen Neches River inundated the main intake system and backup pumps halted. Outside the town of Liberty, about 45 miles from Houston, dozens of people were still cut off by the swollen Trinity River. A Texas National Guard helicopter landed at the local fire department with pallets of drinking water.

About 2,800 evacuees remained in Houston's megashelter at the NRG Center on Monday—from a high of about 10,000, according to a spokeswoman at the convention center. Victims are being consolidated from other smaller shelters, and many others have returned home.

Houston Mayor Sylvester Turner said much of the city was hoping to get back on track after Labor Day, some 10 days after Hurricane Harvey made landfall.

"Anyone who was planning on a conference or a convention or a sporting event or a concert coming to this city, you can still come," the mayor told CBS on Sunday. "We can do multiple things at the same time."

Mr. Turner posted on Twitter that he would announce Tuesday whether to end the citywide curfew that runs from midnight to 5 a.m., and he has asked businesses affected by the curfew to remain patient.



Jenny Killingsworth, right, held the hand of Janeah Tieman, 10, while helping clean up a home damaged by floodwaters in the aftermath of Hurricane Harvey in Houston on Monday. PHOTO: DAVID J. PHILLIP/ASSOCIATED PRESS

“It has helped to maintain the public safety during some very stressful times,” Mr. Turner said during a news conference Saturday. Shelter workers and people traveling to and from work are exempt from the curfew.

Mr. Abbott previously said the state might need more than \$125 billion in aid, but on Sunday he revised that figure, comparing the storm’s damage to that of Hurricane Katrina, which hit New Orleans and other parts of the Gulf Coast in 2005.

“Katrina caused, if I recall, more than \$120 billion [in damage] but when you look at the number of homes and business affected by this, I think this will cost well over \$120 billion, probably \$150 billion to \$180 billion,” he said in an interview with Fox News.

Harvey slammed into Texas on Aug. 25 as a Category 4 hurricane, but it brought the worst flooding to Houston and other areas as a tropical storm. The rain totaled nearly 52 inches. On Monday, the Houston Chronicle reported that the number of people missing or dead in connection to the storm is now 75.

In other storm-ravaged neighborhoods, people worried about thefts.

Police in Bellaire, southwest of downtown Houston, received reports of people picking through water-damaged possessions and urged those cleaning up to keep anything left outside to dry closer to their homes and separate from what was considered a total loss, the Associated Press reported.

In other parts of the region, residents were being threatened by a different kind of intruder.

“We have everything from snakes to alligators to fire ants,” said Lach Mullen, spokesman for the Office of Emergency Management in Fort Bend County, southwest of Houston. “Even though evacuation orders have been lifted, people have to be wary of new occupants in their homes. They don’t want to occupy the same space as you; they will leave on their own when they can.”

—Melanie Evans contributed to this article.

**Write to** Douglas Belkin at [doug.belkin@wsj.com](mailto:doug.belkin@wsj.com) and Tawnell D. Hobbs at [Tawnell.Hobbs@wsj.com](mailto:Tawnell.Hobbs@wsj.com)

*Appeared in the September 5, 2017, print edition as ‘Waters Ebb, But Texans Face Threats.’*



# Harvey began with raging winds, but its legacy will be water

SHARON COHEN, AP NATIONAL WRITER | September 4, 2017 | Updated: September 5, 2017 8:27am

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Hurricane Harvey began with raging winds, but its legacy will be water. Seemingly endless, relentlessly insidious water — a staggering 40 inches or more that swamped parts of Houston in just five days.

Harvey scooped tons of water from the sea and hurled it down on the nation's fourth-largest city, drowning vast swathes of the landscape and battering it with almost a year's worth of rainfall.

Rooftops became islands poking up through swirling floodwaters. Thousands of houses were destroyed, and tens of thousands more, soaked and pounded by the storm, could face the wrecking ball.

The water — and the muck and mold that follow — will create misery that will linger for years and likely cost tens of billions of dollars all told.

For many of the displaced in southeast Texas, floodwaters stole every possession, leaving them to navigate insurance forms and federal disaster aid applications as they ponder how to even move forward.

The deluge will instill deep anxiety, too, for many who lived through Harvey, and inflict lasting emotional scars on some survivors.

In a storm destined for the history books, it's the ravages of the water that define the story.

## —WATER SATURATES

A broken pipe in a house is reason to call a plumber. A house buried in water for weeks could mean it's time for the demolition crew.

It's too soon to know how many of more than 37,000 heavily damaged homes in Texas are salvageable, but Houston officials say some will be submerged in water for up to a month. Thousands have already been destroyed in

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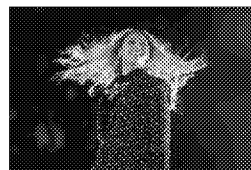
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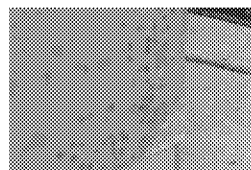
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### TEXAS

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the state. Evacuees are slowly returning to their inundated homes, and others are staying in government-paid hotels .

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The longer a house is under water, the greater the damage.

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Furniture, refrigerators and other appliances will almost certainly be ruined. Water can compromise or ruin wallboard, electrical systems, insulation, doors, windows and cabinets. Wooden floors warp, swell and can even float away; mold grows in the moist, humid interior, posing the risk of respiratory problems.

For those that can be repaired, civil engineers recommend that after the contaminated water and muck are removed, it's best to strip out the wallboard and insulation so the house is reduced to the studs, which must be dried before any rebuilding begins.

Steve Cain, a Purdue University extension disaster specialist, offers simple advice:

"You don't want to be rushing into your home after a flood," he says. "You want to make sure to go back when it's safe. ... You can fall through a floor, gas lines could be leaking, electrical systems can be damaged and if the electricity is not shut off, you can get electrocuted."

— WATER SCOURS

A few inches of rain can snarl traffic. Forty inches or more of water pounding the pavement in less than a week can undermine the streets people drive on every day.

The relentless pressure of water can loosen the foundation of asphalt roads — compacted soil, gravel or sand — leading to cracking and potholes. Pieces of pavement can slide away.

Big bridges will fare better in Texas. They're likely to escape major damage because the flooding was caused by the gradual rising of water, according to Julio Ramirez, professor of civil engineering at Purdue.

This is in contrast to some other natural disasters. For example, when an earthquake-induced tsunami hits a coastal area, bridges can be weakened when they're struck by large debris — sometimes even cars and buildings — carried by the force of the giant tidal wave, Ramirez says.

Andy Herrmann, past president of the American Society of Civil Engineers, says the great majority of Texas bridges aren't vulnerable to damage from heavy rains because they're built on piles or caissons — often hollow pipe filled with concrete.

But the smaller ones that sit on soil or rock, he says, could run into trouble if rapidly moving floodwaters eat away at the foundation, a process known as scouring. If that happens, a bridge could tilt or collapse.

Jeff Lindner, of the Harris County Flood Control District, also says pipelines could be subject to scouring, exposing them and making them more susceptible to breaking.

During the 1994 floods in the Houston area caused by about 20 inches (50 centimeters) of rain, eight pipelines broke across the San Jacinto basin, spilling almost 1.5 million gallons (5.68 million liters) of oil and petroleum products. Federal officials say more than 500 people suffered injuries, mostly minor burns, when fuel from those pipeline breaks ignited.

## — WATER DISPLACES

New Orleans was transformed by the devastating impact of water from Hurricane Katrina. Now the same thing is happening in Houston, displacing people and businesses and disrupting the local economy.

Experts expect the recovery from Harvey to go far smoother than that of post-Katrina .

"I think Houston will rebound much more gracefully, more quickly than New Orleans," says Mark Zandi, chief economist at Moody's Analytics. "People aren't going to leave. It's a diverse economy."

Zandi notes that New Orleans' economy depends almost entirely on tourism and energy, while Houston prospers from health care, transportation, oil refineries and the chemical industry, among others.

Houston is part of a coastal region that supplies nearly a third of U.S. oil-refining capacity. Its port is the nation's second-busiest. The city is headquarters to 20 Fortune 500 companies. NASA's Johnson Space Center is also based there.

Houston has 2.3 million people. New Orleans is home to less than 400,000 residents, about 90,000 fewer than pre-Katrina levels.

Though Zandi expects Houston to come back strongly, he says, that depends, in part, on a strong federal disaster aid package. And he adds some people who are thinking of moving to Houston may have reservations because this is the third big storm since 2015.



Moody's estimates the total economic loss from Katrina at \$175 billion and Harvey's could be as much as \$108 billion. But it's too early to know the full scope of the Texas disaster.

As Zandi says: "It's a script still being written."

## — WATER SICKENS

Long after the danger of drowning subsides, water, oddly enough, can wreak havoc on your health — by forcing you to dry places.

Thousands of Houston area storm survivors who fled flooded homes found refuge in large shelters, but those temporary living quarters can become incubators for infections.

"You have all these people congregated together very closely for prolonged periods of time," says Dr. William Schaffner, an infectious diseases specialist at Vanderbilt University Medical Center. "That's an ideal circumstance for the spread of respiratory infections."

Schaffner also warns that evacuees in crowded shelters can develop norovirus, a highly contagious intestinal infection marked by vomiting and diarrhea — an illness that has been known to occur on cruise ships.

New health problems can arise once flood victims return homes. Inside, mold can cause breathing troubles, but that can be avoided by wearing a mask. Outside, standing pools of stagnant water contaminated by chemicals and garbage, become ideal breeding spots for mosquitoes. A bite can have serious consequences.

"We worry about West Nile virus, certain kinds of encephalitis viruses," Schaffner says.

Houston may be able to minimize the risks because it has a strong mosquito abatement program if it can be re-established, according to Schaffner.

Houston's floodwaters, contaminated by lawn pesticides, spilled fuel and runoff from oil refineries and chemical plants, also pose potential health risks, according to experts. State officials reported several dozen sewer overflows in hurricane-impacted areas, though the public works department in Houston has reported its water is safe.

Another concern are Superfund sites, some of the most polluted places in the nation. The Associated Press surveyed seven of these toxic sites and found all had been inundated with floodwaters. After that report, Texas Gov. Greg Abbott said the state will be working with the Environmental Protection Agency to deal with any possible threats of contamination.

## — WATER HAUNTS

Superstorm Sandy. Katrina. And now Harvey.

The epic disasters in the New York metro area and New Orleans left residents in both places wrestling with the emotional anguish of losing their homes, their livelihoods and their sense of security. The same psychological trauma is likely to emerge in southeast Texas.

Those feelings can linger for years. One study found that residents in the path of Sandy suffered from depression and post-traumatic stress. Another concluded that children displaced by Katrina still had serious emotional or behavioral problems five years later.

Some of the most common stress-related reactions to disasters such as Harvey are anxiety, a change in appetite, insomnia and a sense of uncertainty — a feeling of what's next, according to Dr. Anita Everett, president of the American Psychiatric Association. Headaches or aches and pains can also surface, she notes.

"It's a little bit like a grieving process," Everett says. "We sort of expect that there's going to be waves of worry, waves of anxiety and that's all within the normal experience." But she says that those who are struggling three months after a disaster and can't work or make decisions may want to seek professional help.

Being in a large shelter, though, can boost the spirits of storm survivors because they can share stories and turn to each other for support, Everett says.

"You get a really strong sense of a community that's coming together and working together to rise to the occasion ... Humans are amazingly resilient."

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# Beaumont's running water starts to flow but hard-hit Texas city may feel Harvey effects 'for years to come'

September 4, 2017 at 6:35 PM EDT

Beaumont, Texas, is among the state's cities that were hardest hit by Hurricane Harvey. John Yang talks with Beaumont Police Department Chief James Singletary for an update on restoring running water to residents and how the storm has affected the community.

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As storm victims leave shelters for home, the most vulnerable stay behind with nowhere to go

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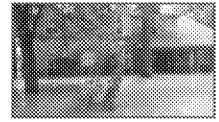
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As storm victims leave shelters, the most vulnerable remain



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## Find all of our stories about Hurricane Harvey

**JOHN YANG:** About 80 miles east of Houston, which is the nation's fourth largest city, Harvey also battered Beaumont, Texas, population of 120,000.

The city is among the hardest-hit in the state.

For the latest on the situation on the ground, I'm joined now by phone by Beaumont Police Chief James Singletary.

Chief, thanks for joining us.

I have got to ask first about the water situation. Late last week, the water plant shut down because of being swamped by floodwater, and backup pumps went down. What's the situation now?

**JAMES SINGLETARY**, Chief, Beaumont Police Department: The water situation now is that we're getting water slowly but surely back to most of our citizens.

It would be a totally different interview to tell you how that happened. But we had some private industries and working with our water folks and getting it restored. So that in itself is an amazing story. But we're slowly but

surely getting the water restored. It's going to be a while before we are going to lift the boil water notice right now.

**JOHN YANG:** So, people, everyone in the town, in the city still has running water now, is that right?

**JAMES SINGLETARY:** Not everybody. But most of them do. And it is trickling right now in some places. And some of them are, you know, better than others.

**JOHN YANG:** What about other conditions, Chief? Has the water started to recede yet?

**JAMES SINGLETARY:** Yes, sir.

The water has started to recede. We have a very big river here next to Beaumont, the Neches River, and it's starting to recede a little bit. It crested a couple days ago, I think. So, the water is starting to recede.

There are still about 3,000 homes that we have not been able to get to, to see what their situation is. We have done a bunch of flyovers with the drones and helicopters, and, gosh, it's just — it's horrific. I have lived here my whole life. I have been a cop for my whole adult life and I have never seen anything like this.

**JOHN YANG:** Chief, have people been able to get back to their homes? You say the water is going down. Have they been able to get back to their homes yet, or is that still a little bit away?

**JAMES SINGLETARY:** Yes, that still a bit away.

There are still areas that we can't even access. And it will be a while before some citizens are able to get back

to their homes. And then there's areas north of us and east of us and even south of us that are in pretty bad shape also, but it's going to be a while.

This thing has impacted this us, this area for years to come, I'm afraid, in so many different areas.

**JOHN YANG:** Chief, I have got to ask you. You and your force are not only working this disaster. You are living through it.

I would imagine some of the homes of some of your force have been affected by this. What's that been like for you, for the men and women of your police department?

**JAMES SINGLETARY:** Well, that's another horrible thing that's happened to our officers and our city workers.

We have had over 130 of our — Beaumont's first-responders, the firefighters and police officers and emergency personnel that have been adversely affected or had actually significant damage to their home.

And most of these officers — and this is what's amazing — this is why I love these guys — most of these officers are here working, and they have no idea how bad their homes are destroyed or how badly their homes are damaged. But they're here working. And, man, it makes you feel great, if you live here in Beaumont, especially if you're the chief of police.

**JOHN YANG:** Chief James Singletary of Beaumont, we're glad to hear things are getting better. And we appreciate your work, your department's work. And our thoughts are with you.

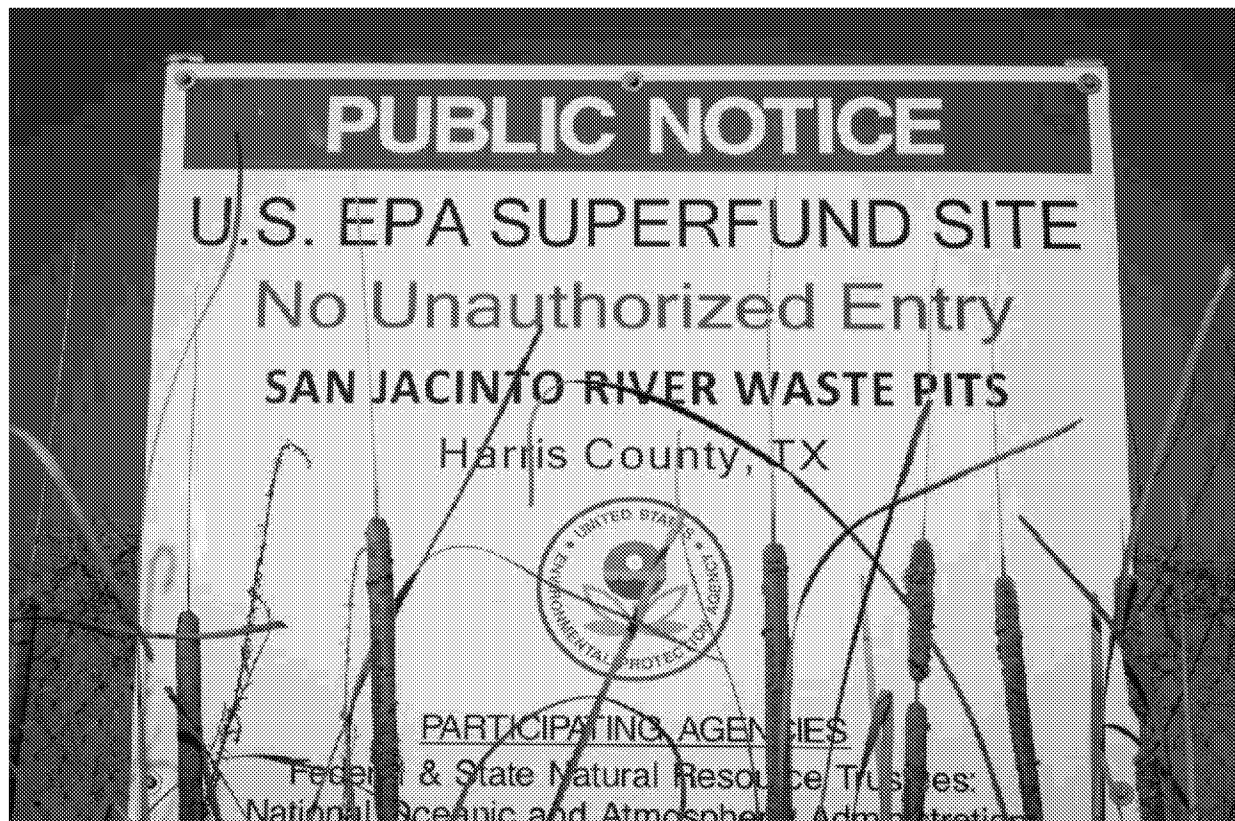
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## Time to clean up the San Jacinto waste pits

Recovery from Harvey should include cleanup of the San Jacinto waste pits

Published 5:07 pm, Monday, September 4, 2017

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A sign warns the public about the EPA Superfund Site not to eat contaminated seafood caught from the water along Interstate 10 near the San Jacinto River east of Houston in Channelview. (Houston Chronicle file photo)

After Noah survived the great deluge, God placed a rainbow in the sky as an everlasting covenant with man, promising to never again punish the Earth with such a deadly flood.

Any rainbow sheen you may see today across the Gulf Coast floodwaters is no godly doing. Runoff from chemical plants, petroleum pipelines and at least a dozen Superfund sites risks transforming the destructive rain into a putrid stew filled with lead, arsenic and other toxic and carcinogenic chemicals.

So you can't help but worry when looking at the pictures of the Vita Bella assisted-living center during Hurricane Harvey - an elderly woman calmly knitting in the Dickinson nursing home while the brown waters swirl around her feet.

They could have used an ark.

The image was shocking enough to hasten a rescue, but the damage may have already been done. After all, some of the worst flood hazards can't be picked up by photograph.

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"There's no need to test it. It's contaminated. There's millions of contaminants," Porfirio Villarreal, a spokesman for the city of Houston Health Department told the New York Times as to the floodwaters.

Nowhere is the risk more worrisome than the San Jacinto waste pits, which sit between the communities of Highlands and Channelview. One of the San Jacinto waste pits, covered by a temporary armored cap, was partially submerged in the river even before Hurricane Harvey. Now they're totally engulfed.

Last year, the Army Corps of Engineers predicted the protective device might not be reliable "under very extreme hydrologic events which could erode a sizable portion of the cap."

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Harvey - which has been called a 1,000-year-flood - would certainly qualify. Now we have to worry that the cap was damaged and the toxic mess has spread downriver to Galveston Bay.

As part of the recovery efforts, Environmental Protection Agency Administrator Scott Pruitt should make time to visit the submerged pits, which were designated a federal Superfund site in 2008.

Pruitt has said he plans to create a "top-10 list" of key Superfund sites and target sites where "the risk of human exposure is not fully controlled."

The pits fit the bill: They've been ravaged by weather and contain dioxin, a highly toxic chemical that increases the risk for several cancers, including lung cancer and non-Hodgkin's lymphoma, and has been linked to birth defects, liver damage and dermatological disorders.

The EPA actually proposed a solution to the pits last year: Remove about 202,000 cubic yards of contaminated material at cost of nearly \$100 million. Of course, the cost and nature of the remediation may have changed depending on whether the armored cap has been damaged.

Regardless, Pruitt should cut through the bureaucratic red tape that has slowed the cleanup of this site and act boldly in holding companies responsible for past contamination.

This site has been unsafe for over 60 years - longer than many Texans have been alive. It is time to finally clean up our river. Any Harvey recovery bill must fund this sort of ecological repair alongside the economic and infrastructure needs.

"For years our communities and local government have told the EPA it is not a matter of if, but when, a storm devastates the pits," Jackie Young, executive director of the Texas Health and Environment Alliance, told the editorial board.

The federal government bears responsibility for Superfund sites like the San Jacinto waste pits, and it falls on Pruitt to uphold his part of that covenant.

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HEARST





# Judge Won't Let Texas and EPA Delay Air Cleanup Again

CAMERON LANGFORD September 5, 2017

) — The Trump administration cannot put off a plan to curb air pollution from Texas power plants until 2019, a federal judge ruled, refusing to further delay a process that's bogged on for nearly a decade.

instilling a new spirit of “cooperative federalism” between the Environmental Protection Agency and Texas that was said to be lacking under former President Barack Obama, Texas and the EPA asked U.S. District Judge Amy Berman Jackson, in the District of Columbia, to give Texas until Dec. 31, 2018 to submit a plan.

Berman Jackson declined. In her Aug. 31 ruling, she gave the EPA until Sept. 9 to submit a plan of its own.

The EPA's Regional Haze Rule requires state and federal agencies to work together to improve visibility in 156 national parks and wilderness areas by reducing pollution.

## CNS Trends



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Industry-friendly Texas is the only state without a plan to clean up its coal-fired power plants. Coal plants emit sulfur dioxide that forms haze.

Texas has more than a dozen coal-fired power plants, with the capacity to generate 19,000 megawatts of electricity.

In Texas, the haze rule is meant to clear the skies above Big Bend National Park and Guadalupe Mountains National Park, both in West Texas near El Paso.

Texas's battle with the EPA started in 2009 when the agency rejected a plan submitted by the Texas Commission on Environmental Quality.

Sierra Club, the National Parks Conversation Association and other environmental groups sued the EPA in August 2011 in District of Columbia Federal Court. They claimed the agency had missed its Jan. 15, 2011 deadline to complete a General Implementation Plan "to prevent and remedy unhealthful, scenery-impairing pollution" in Texas.

The EPA finally finished a haze-control plan for Texas in January 2016, prompting the state and several power companies to sue the agency in the Fifth Circuit Court of Appeals in March 2016.

Texas claimed that the federal plan would require pollution-control upgrades at 15 power plants at a cost of \$2 billion, making the state's power grid less reliable because some operators would find the upgrades too expensive and would shut down.

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Soldiers ...

After a three-judge panel of the Fifth Circuit sided with Texas and the power companies and stayed the rule, the EPA said in December it would work out a compromise plan.

Texas and the EPA have been working together since President Donald Trump took office and appointed Scott Pruitt as chief of the EPA.

Pruitt sued the EPA 13 times during his tenure as Oklahoma attorney general. As EPA chief he has targeted Obama-era programs aimed at reducing greenhouse gases that he calls overly burdensome for states.

With Pruitt in charge, the EPA lets states take the lead in pollution-control plans. Texas and the EPA signed an agreement on Aug. 14 in which the EPA endorsed Texas's proposal for an interstate cap-and-trade program rather than power plants upgrades.

Texas Commission on Environmental Quality and EPA asked Berman Jackson to give Texas until Dec. 31, 2018 to submit its plan, but the judge said she's unwilling to wait another 15 months.

"It is true that the cooperative federalism ideal is incorporated into the statutory scheme, which calls for state implementation plans to be the starting point. But the statute also mandates that the federal government *must* step in if a state's submissions are late or insufficient," Berman Jackson, an Obama appointee, wrote in a 9-page order.

The EPA did not reply to a request for comment on Berman Jackson's order. The Texas Commission on Environmental

Quality declined to comment. The commission said the details of its cap-and-trade program have yet to be determined.

Sierra Club senior attorney Elena Saxonhouse told Courthouse News the program would set caps on the amount of pollutants power plants can emit, and plant operators could comply by meeting their cap or purchasing credits from other plants that have reduced their emissions below their caps.

“Even if the caps are set at a lower level than current emissions, a trading program does not control where geographically the reductions occur,” Saxonhouse said. “The problem is that one part of the state could see some cleanup while others still bear the brunt of the pollution.”

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Feds Back Off  
Pollution Rule for  
Texas Plants  
December 2, 2016  
In "Business"

Environmentalists  
Fight for Clean Air on  
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January 18, 2017  
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## Guest Columns

### Don't delay methane regulations

By Heidi Topp Brooks / Albuquerque Attorney

Sunday, September 3rd, 2017 at 12:02am

As the EPA considers whether to delay implementation of methane pollution standards, which would not only greatly reduce methane leaks but would also put money into state coffers, I write to say that as a citizen of the state of New Mexico I am very concerned about the serious and ongoing problems caused by methane leaks.

First, of course, there is the climate effect of methane releases – methane is 86 times more potent a greenhouse gas than is carbon dioxide. I'm writing because as a mother and grandmother I feel it is my responsibility to do as much as I can to leave a livable world for my children and grandchildren.

Global warming is happening, as was noted in the advance, unofficial release of the National Climate Assessment, and has been documented by tens of thousands of scientists around the world. Moreover, as our government's top scientists report with "very high confidence," the magnitude of climate change depends primarily on the additional amount of greenhouse gases emitted globally. To have any chance of slowing the runaway freight train of global warming, we must do everything that we can to stop leaks of methane. This is the first reason that I oppose any delay in the implementation of methane pollution standards.

Second, I have heard statements of people who live in the area of the Four Corners methane plume as well as in the southeast part of New Mexico in Lea and Eddy counties. Their health consequences and ongoing health risks are severe, due in significant part to the other chemicals that leak along with the methane, chemicals like hydrogen sulfide and benzene, a known carcinogen. This health burden is borne most immediately by the unfortunate and sometimes forgotten people living in areas of concentrated oil and gas development, but the ramifications extend to the cost of health care in my state, the livability of my state, and whether my state is considered collateral damage in the effort to produce fossil fuel energy.

I liken this to the efforts to get lead out of gasoline. It was resisted by industry but now is uniformly recognized as having been a necessary measure, given the health risks. Stopping leaks of methane should be considered just as vital, for reasons of both the immediate health effects in the areas of the leaks as well as the contributions of methane to global warming.

I ask that the EPA do its job to "protect human health and the environment" by maintaining and enforcing these standards and protecting our state's health. The EPA has an obligation to protect all Americans from harmful methane pollution. Any attempt to slow or dismantle standards that cut pollution from the oil and gas industry is a direct assault on our health.

With the ongoing expansion of drilling in our state these necessary, common-sense and low-cost rules are more crucial than ever.



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 **NEWS**TOPICS ▾

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HARVEY 3 HRS AGO

## As Houston grew, officials ignored 'once-in-a-lifetime' chance to spare thousands from flooding

*Steve Thompson, Staff Writer*

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Two decades ago, Harris County planners predicted with chilling accuracy just how devastating a storm like Hurricane Harvey would be to the Houston area. Far lesser storms, they determined, could wreck a large swath of the city and its western suburbs.

In a report dated May 1996, engineers for the Harris County Flood Control District concluded the area's reservoir system was severely insufficient and imperiled thousands of properties. The report's authors proposed a \$400 million fix: constructing a conduit - an underground channel - that would carry water out of the reservoirs and into the Houston Ship Channel more quickly.

Had the report's recommendations been heeded, the catastrophic flooding that struck Houston a week ago might have been greatly diminished, sparing thousands of homes from floodwaters.

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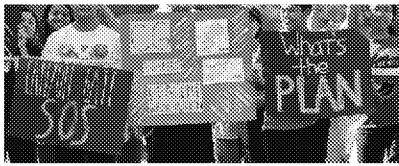
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Instead, the report got filed away and was all but forgotten. Government leaders ignored its advice.

Today, the report reads like a prophecy of the flooding that swamped west Houston and surrounding areas. Its authors knew which neighborhoods would flood and why, and in which places the flooding would be especially damaging because the water could pool for weeks.



HARVEY

### **As floodwaters recede, Houston homeowners find more than nature to blame**

"The primary flood threat facing the citizens of west Harris County and west Houston comes from the inability to drain the Addicks and Barker reservoirs in an efficient manner," the report said.

When built in the 1940s, the area's reservoir system was adequate, the report said. But because of changes made to the system, and given the pace of urban development 50 years later, "the project's original design parameters and assumptions are severely outdated and invalid."

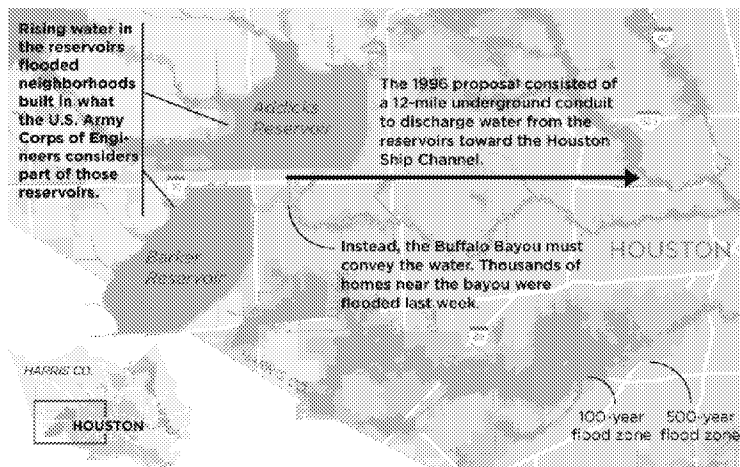
In addition to the report's main proposal of a conduit, its authors raised other alternatives, such as digging the reservoirs deeper, buying out properties at risk and creating new regulations on development.

And then there was a final, stark alternative: "Do nothing and accept risk of flooding."

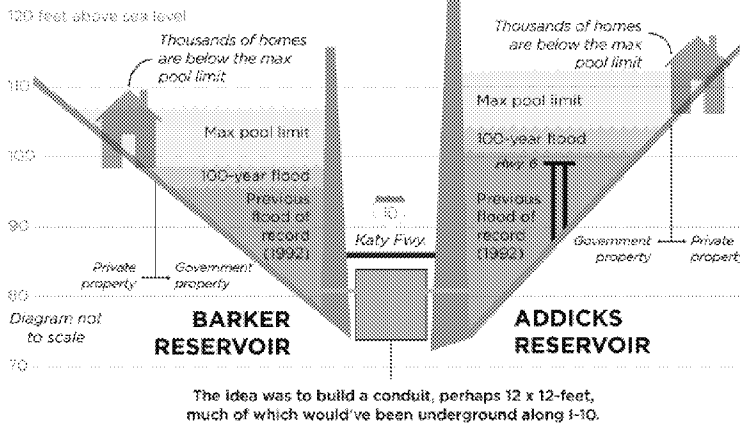


## A proposal to fix the reservoir system

In May of 1996, knowing that water from the reservoirs could flood thousands of homes, engineers proposed a conduit to move it downstream more efficiently. The conduit was not built.



## Critical reservoir levels



SOURCES: Harris County Flood Control Planning Department; FEMA; The New York Times; Houston-Galveston Area Co. MICHAEL HOGUE/2017 Artist

Asked Monday about the report, Harris County flood control officials said they could not immediately locate a copy and were unfamiliar with the details.

"What I recall is, and I haven't read the report since back then, was that it was going to be very difficult to do physically," said Steve Fitzgerald, the flood control district's longtime chief engineer.

But Harris County's flood control director at the time the report was created, Arthur Storey, said Monday that he remembered the proposal well.

"This, what we have before us, is a massive engineering and governmental failure. I'm both angry about it and embarrassed about it," said Storey, who after his time as flood control director went on to lead the county's public infrastructure department. He retired in 2015 at 78 years old.

"My embarrassment is that I knew enough that this was going to happen," he said, referring to the destruction Harvey inflicted on west Harris County. "And I was not smart enough, bold enough to fight the system, the

## Rising threat

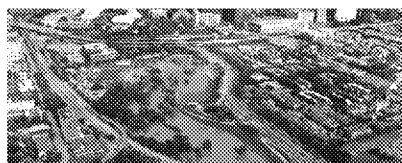
After deadly floods in 1929 and 1935, the U.S. Army Corps of Engineers built two large reservoirs in what was then ranchland west of Houston. The idea was to store up water from heavy rains, rather than let it gush straight into the Buffalo Bayou, which runs through the city and carries stormwater to the Houston Ship Channel.

Most of the time, the Barker and Addicks reservoirs would be dry, and the land could be used for soccer fields, golf courses and dog parks. Only in heavy rains would they hold water.

After a rain subsides, water within the reservoirs can be released into the bayou slowly. Originally, the earthen dams that hold water in the reservoirs were designed without floodgates. Once the water reached a certain level, it could spill out at up to 15,700 cubic feet per second.

But the threat of flooding in areas below the dams rose during the 1940s and 1950s, as urban development crowded the Buffalo Bayou upstream of Houston. To avoid such flooding, the corps installed floodgates that could release the water more slowly, at no more than 4,000 cubic feet per second. Any faster than that, the corps knew, and homes near the bayou would flood.

During hard rains in March 1992, the reservoirs reached record levels. State Highway 6, which runs through Addicks Reservoir, had to be shut down for 10 days while officials waited for the water to drain.



HARVEY

**After Harvey's destruction, will a new and different Houston emerge?**

The event worried Harris County flood control planners. Letting the water out too fast endangered development downstream from the reservoirs, because the bayou running toward Houston would overflow.

But letting the water out too slowly created another risk, because development was encroaching on the upstream fringes of the reservoirs. Entire neighborhoods were being built inside the reservoir bowls - in places that the Corps of Engineers and Harris County planners knew would flood if the reservoir levels got high enough.

The corps purchased all the land inside the reservoirs that would be covered by water in a 100-year rain event (one with a 1-in-100 chance of happening any given year). But on land at the western fringes of the

~~reservoirs, which would be covered in water during a greater than 100-year rain, developers were replacing~~

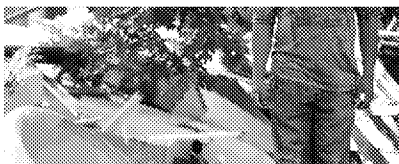
## Action urged

In 1996, the planning department of the Harris County Flood Control District created its report urging action.

"Of primary concern is the fact that the reservoirs do not function as originally intended which translates into increased risk of flooding upstream of the reservoirs and less protection downstream," the report said. "As development continues behind the reservoirs, there is the potential to expose as many as 25,000 homes and businesses in the reservoir fringe areas to flooding."

The report called for a study on the feasibility of constructing an underground conduit of perhaps 12 feet by 12 feet to carry water out of the reservoirs and safely past developed areas downstream.

The timing, the report said, was right. The Texas Department of Transportation was embarking on a reconstruction of the Katy Freeway, the stretch of Interstate 10 west of downtown Houston. It would be a good route for the drainage channel.



### HARVEY

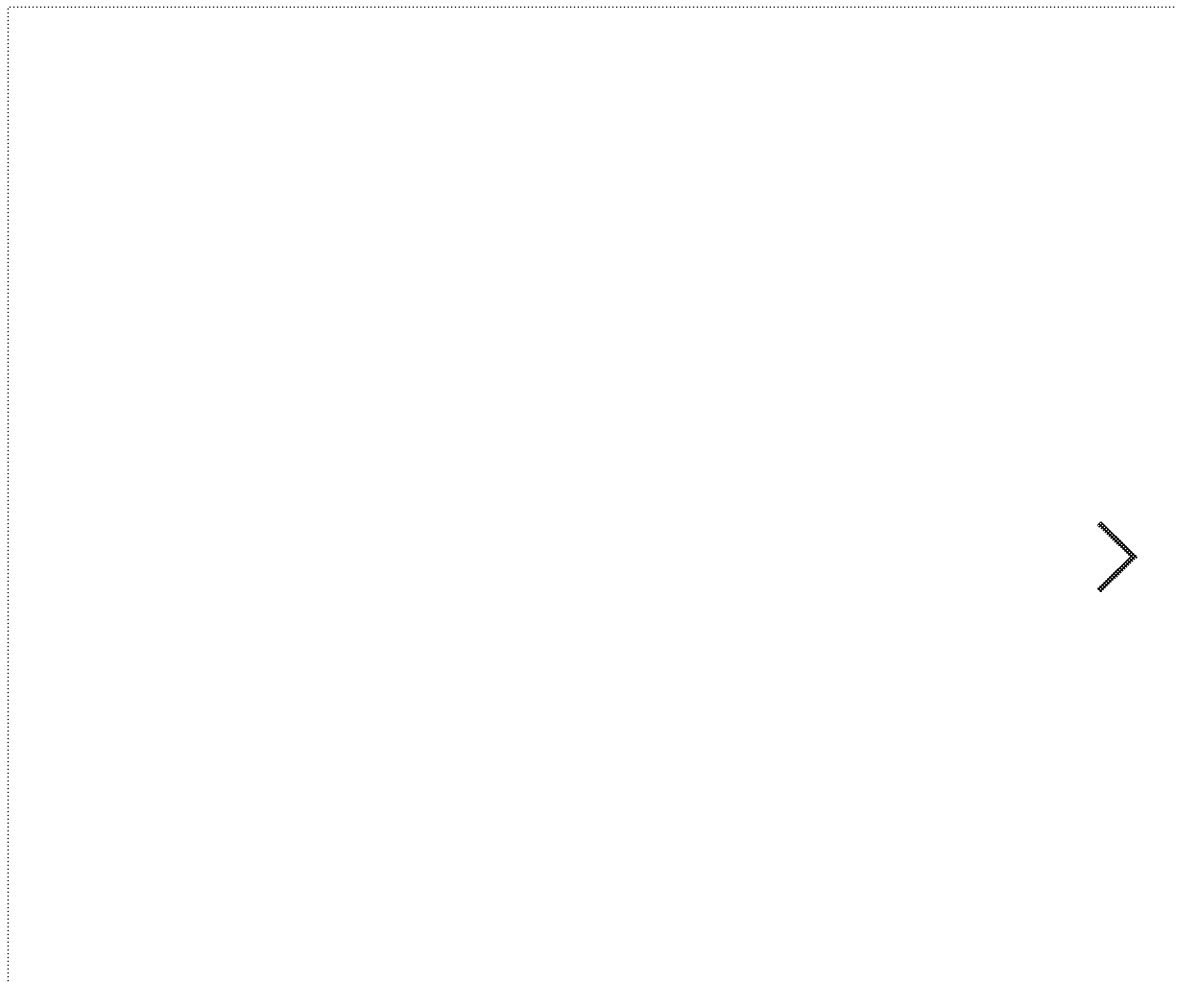
**As storm's death toll rises to 60, Hurricane Harvey's displaced stream home to clean up**

"The potential flood control problems are severe enough to consider this magnitude of project, and the major transportation construction in the Katy Freeway corridor presents a unique, once-in-a-lifetime opportunity to consider this type of flood control option," the report said. "To determine if a conduit system under the freeway is justified, it needs to be evaluated against other options."

Without such a conduit, the reservoirs posed an increasing risk, the report said. Because they had to be drained so slowly, there might not be time to empty the water between storms. That meant a series of smaller storms could raise the water level just as could one big storm, a danger the report called "ratcheting."

"It is conceivable and not hard to imagine that a single storm event could have a catastrophic impact to several thousand people in the reservoirs and the fringe areas," the report said. "But, it's just as important to realize that a rainy season consisting of several 'normal' rain storms ... could be just as catastrophic because of the ratcheting effect."

Photo Gallery 1/4



(Tom Fox/The Dallas Morning News)

"Flood levels would not recede over the course of several hours like typically experienced with flooding from channels," the report said. Rather, houses being flooded by slow-draining reservoir waters "could be inundated for an extended period."

## Tragic reality

Last week, the report's predictions became a tragic reality. The reservoirs became vast lakes, working as designed to spare Houston from a flood. But by Aug. 28, the reservoirs were nearly full.

The water had spread to the edge of the government-owned land and was overtaking the neighborhoods beyond.

Rather than let the water keep rising, the corps opened the floodgates to let a controlled amount escape. And instead of the normal 4,000 cubic feet per second, corps officials opened the gates wide to let water spill out at more than 13,000 cubic feet per second. They had to begin to get rid of it. They did so knowing it would flood neighborhoods downstream.

And just as the 1996 report described, water in many of the flooded homes would not drain for days or even weeks.

Storey, the former county flood control director, took a break from recovering belongings from his own flooded home Monday when reached by phone.

Long ago, Storey said, one of his best engineers came to him and an elected official about the reservoir problems. "He said, 'Let me draw you a picture.' "

"We both said, 'Oh s---, no kidding, really?' " Storey recalled.

"We really knew that at that time it would be a wise thing to stop development of any land upstream of the reservoir, have the feds buy it out, and make it part of the federally owned system," he said.

Storey said he laments that he and others did not do more.

"I wish I had gone to the commanding general of the Southwestern Division of the Corps of Engineers, and sat in his office, and said, 'Sir, I'm not going to leave your office until we come up with a better solution, because it damn well is gonna rain, and it's darn well gonna hurt people,'" Storey said. "I didn't do that."

He added: "Would I have been fired before I got halfway out of town? Maybe, but I didn't do it. And the irony is my house flooded. And all of my neighbors' did. And it was by intentional discharge by the people in command and in charge of the infrastructure."

"Anytime anybody comes up with a good idea, there are lots of studies and information about why it won't work, it can't be afforded, or it's not practical or politically expedient, and there was all of that," he said.

"They built the highway, and there's no storm sewer under it, and don't we wish it were today."

## No funding

Richard Long has worked for the Army Corps of Engineers for more than three decades, much of it overseeing operations of the Addicks and Barker reservoirs.

"Sure, it would have been nice if we'd have had all the land necessary to hold the water on, and sure, it'd have been nicer if we had a conveyance system that would carry all these large releases that we have," Long said when asked about the 1996 report.

"Without federal funding we can't do anything like that," he said. But the county is "welcome to do that if they can work with whatever partners they need to do that, and we would encourage it to happen."

Steve Radack is Harris County commissioner of the precinct that contains the reservoirs, and has been since 1989. He said he and many others have long understood the reservoirs' problems.

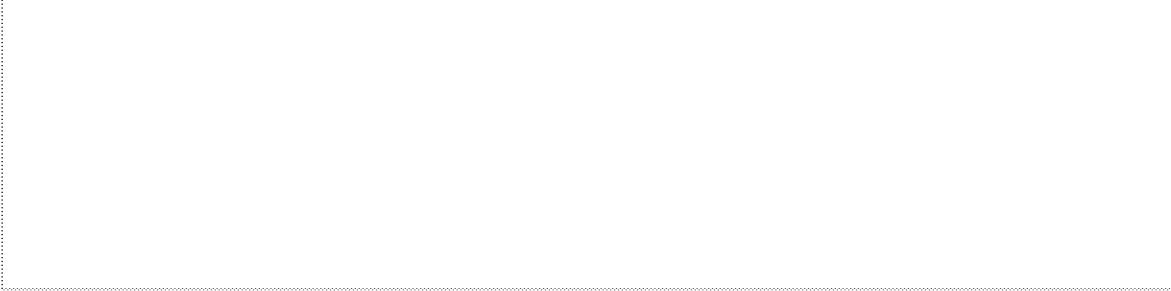
Radack said blame for the lack of a fix falls on the U.S. Congress, which never allocated the money.

"The corps has done an outstanding job of managing this reservoir, outstanding," Radack said. "But the problem is if you don't give them the money to do what they need to do, they can't do it.

"They knew, they asked, they didn't receive," he said.

[Photo Gallery](#)

1/2



(Smiley N. Pool/The Dallas Morning News)

Many of the thousands of homeowners who live near the reservoirs, however, didn't understand the risks those reservoirs posed. Aaron Voges lives with his wife and two kids, 7 and 12, in a flooded neighborhood called South Park, one of those located inside the reservoir.

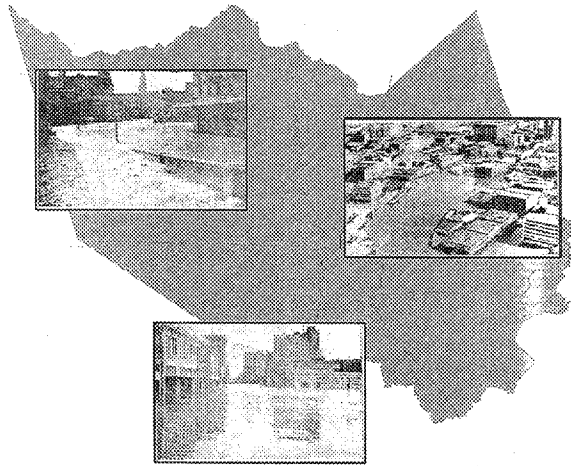
"For some stupid reason I thought that levee that I see on my way home, I thought that protected me," he said. "I had no idea that there were plans in place to flood me to protect other people, which blows my mind."

Voges says even if he can restore his home, it now won't be worth near what he owes on his mortgage.

"Why did they build the neighborhood? Why did they let people buy out there?" he said. "It lowers what little faith I have in my government."

[Katy Freeway Corridor Flood Control Study](#) by [cityhallblog](#) on Scribd

## KATY FREEWAY CORRIDOR FLOOD CONTROL STUDY



HARRIS COUNTY FLOOD CONTROL DISTRICT  
PLANNING DEPARTMENT  
MAY 1996

*Katy Freeway Corridor Flood Control Study*

### KATY FREEWAY CORRIDOR FLOOD CONTROL STUDY

#### EXECUTIVE SUMMARY

There are a number of drainage and flood control problems in the Buffalo Bayou watershed, including problems with the Addicks and Barker reservoir systems. Of primary

HURRICANE HARVEY HITS TEXAS: FLOODING, DEVASTATION FOLLOW

**Huge fire burns at Houston-area chemical plant flooded by Harvey**

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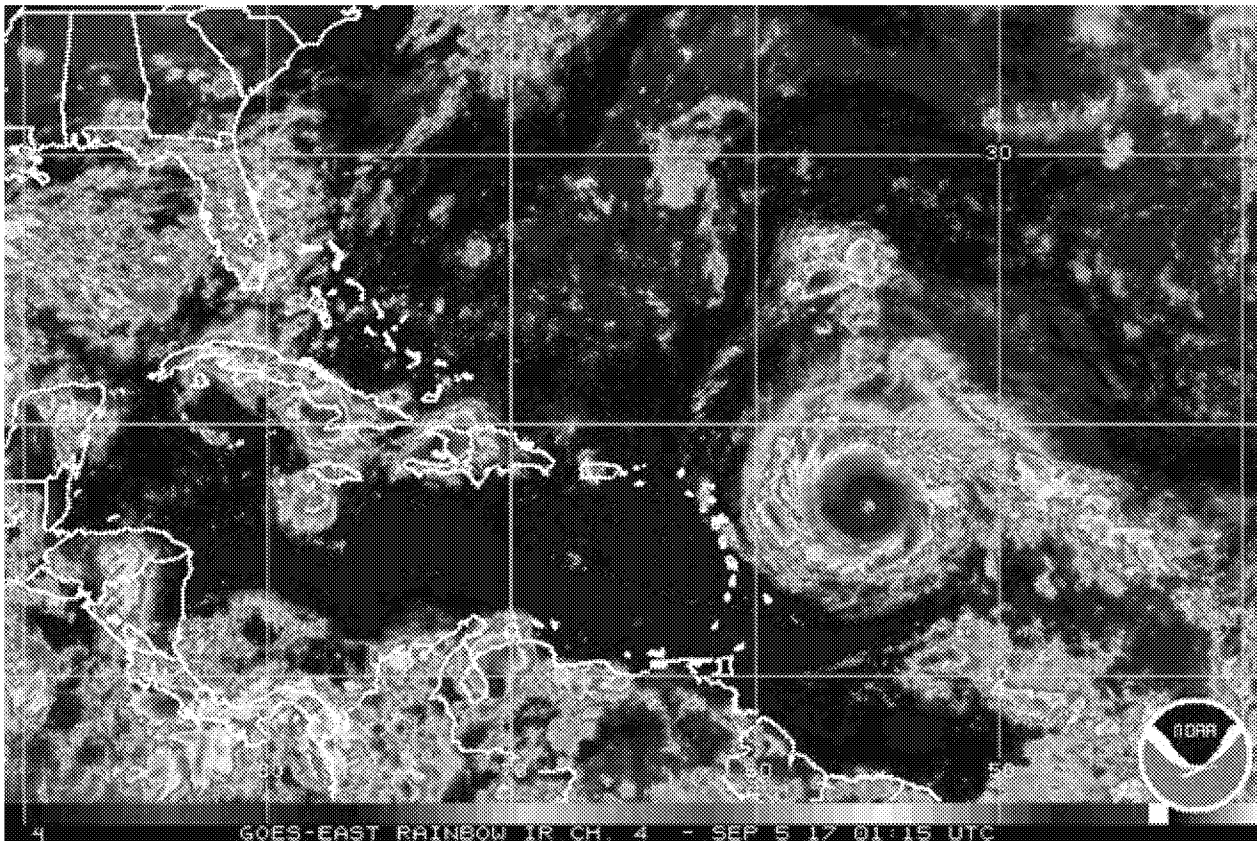
# Irma strengthens to Category 5 storm as it nears Caribbean

By The Associated Press

This article was published today at 9:01 a.m.

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This Monday, Sept. 4, 2017, satellite image provided by the National Oceanic and Atmospheric Administration shows Hurricane Irma nearing the eastern Caribbean. Hurricane Irma grew into a powerful Category 4 storm Monday. (NOAA via AP)

Comments

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SAN JUAN, Puerto Rico — Hurricane Irma strengthened into a dangerous Category 5 storm Tuesday as it roared toward the northeast Caribbean on a path that could take it to the United States.

The U.S. National Hurricane Center said Irma had sustained winds of 175 mph and was centered about 270 miles east of Antigua. It was moving west at 14 mph.

The center said there was a growing possibility that the storm's effects could be felt in Florida later this week and over the weekend, though it was still too early to be sure of its future track: "Everyone in hurricane-prone areas should ensure that they have their hurricane plan in place."

Irma's center was expected to move near or over the northern Leeward Islands late Tuesday and early Wednesday, the hurricane center said. The eye was then expected to pass about 50 miles from Puerto Rico late Wednesday.

Authorities warned that the storm could dump up to 10 inches of rain, cause landslides and flash floods and generate waves of up to 23 feet. Government officials began evacuations and urged

people to finalize all preparations as shelves emptied out across islands including Puerto Rico.

"The decisions that we make in the next couple of hours can make the difference between life and death," Puerto Rico Gov. Ricardo Rossello said. "This is an extremely dangerous storm."

Residents on the U.S. East Coast were urged to monitor the storm's progress in case it should turn northward toward Florida, Georgia or the Carolinas.

"This hurricane has the potential to be a major event for the East Coast. It also has the potential to significantly strain FEMA and other governmental resources occurring so quickly on the heels of (Hurricane) Harvey," Evan Myers, chief operating officer of AccuWeather, said in a statement.

In the Caribbean, hurricane warnings were issued for 12 island groups, including the British Virgin Islands, where the governor urged people to evacuate the tiny island of Anegada if they could ahead of the storm.

Vivian Wheatley, proprietor of the Anegada Reef Hotel, planned to stay behind. She said she would stay in one of the hotel rooms and take advantage of the generator since there were no guests.

"We know it's a very powerful (storm), and we know it's going to be very close," she said. "Let's hope for the best."

People in the U.S. territory of Puerto Rico braced for blackouts after the director of the island's power company predicted that storm damage could leave some areas without electricity for four to six months. But "some areas will have power (back) in less than a week," Ricardo Ramos told radio station Notiuno 630 AM.

The utility's infrastructure has deteriorated greatly during a decade-long recession, and Puerto Ricans experienced an island-wide outage last year.

Both Puerto Rico and the U.S. Virgin Islands expected 4 inches to 8 inches of rain and winds of 40-50 mph with gusts of up to 60 mph.

"This is not an opportunity to go outside and try to have fun with a hurricane," U.S. Virgin Islands Gov. Kenneth Mapp warned. "It's not time to get on a surfboard."

A hurricane warning was posted for Antigua and Barbuda, Anguilla, Montserrat, St. Kitts and Nevis, St. Martin, Saba, St. Eustatius, St. Maarten and St. Barts, Puerto Rico, and the U.S. and British Virgin islands. A tropical storm warning was in effect for Guadeloupe and Dominica.

Meanwhile in Florida, residents took advantage of the Labor Day holiday to empty many store shelves of drinking water and other supplies in advance of the storm. Also Monday, Florida Gov. Rick Scott declared a state of emergency for the state's 67 counties to give local governments "ample time, resources and flexibility" to prepare.

[http://www.theadvocate.com/baton\\_rouge/news/communities/westside/article\\_c2803596-8f28-11e7-80b1-2fec94c4ea63.html](http://www.theadvocate.com/baton_rouge/news/communities/westside/article_c2803596-8f28-11e7-80b1-2fec94c4ea63.html)

# False River set for drawdown, more dredging, in bid to restore oxbow lake's health

BY TERRY L. JONES | TJONES@THEADVOCATE.COM SEP 2, 2017 - 6:15 PM



Threadfin shad killed as a result of a late October cold front wash back and forth near the public boat launch on False River, Thurs. Nov. 10, 2016.

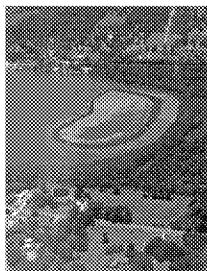
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ADVOCATE STAFF PHOTO BY TRAVIS SPRADLING

Terry Jones

Still struggling to restore the health of ailing False River, the Pointe Coupee Parish Police Jury is about to draw down the water level of the oxbow lake for the third time for more dredging.

The parish will draw down the water level of the lake, a popular recreational waterway, starting Tuesday. The water level will be lowered by 5 ½ feet for the next four months.



**False River drawdown plan irks residents who cite damage to property**

*Story Continued Below*

State Rep. Major Thibaut, D-New Roads, said the state will install several more weirs along one of the two major tributaries that flow into the lake. It will also begin another large-scale dredging project on the north end of False River to remove decades of sediment build-up that has mostly contributed to the lake's decline, he said.

"We're trying to attack this thing from all ends," Thibaut said.

Thibaut sits on the False River Watershed Council and pushed in the state Legislature to secure the more than \$4 million in state funds so far that have been used to improve the lake's water quality.

False River, once a premier spot for trophy bass fishing, has been in a state of decline for several decades due to heavy silt buildup at the bottom of the lake that impeded vegetation growth and curtailed fish-spawning habitats.

The Louisiana Department of Wildlife and Fisheries has given the parish the OK to lower False River's normal pooling stage, which is around 16-feet, twice already since restoration efforts ramped up in 2012.

### **Pointe Coupee Parish Police Jury agrees to more drawdowns of ailing False River**

The drawdowns help sunlight reach the lake's bottom which, in turn, helps dissolve the heavy build-up of sediment beneath the water.

The drawdowns have sparked controversy. With the first one, property owners along the lakeshore complained that reducing the lake's water level caused structural damage to their bulkheads. Last year it was criticized for causing a massive fish kill.

Nevertheless, state environmental experts have said the past two drawdowns have vastly improved the lake's water quality. They say it has helped with aquatic vegetation growth and with the solidifying parts of the lakebed, making it easier for game fish to lay eggs and replenish their populations.

### **The water's fine: Here's why thousands of dead fish washed ashore along False River**

As a result of those improvements, the Police Jury has already agreed to repeat several more drawdowns in 2020, 2023 and 2026.

Thibaut said state officials in the coming weeks will start installing weirs and making design modifications along one of the two canals that flow into the oxbow lake. Similar work to limit sediments draining into False River was completed recently along the other canal that flows into the lake, he said.

"These weirs will act like silt traps and slow down the water flow so you don't have that much erosion and sediment traveling into the lake," Thibaut said.

He noted that about 30,000 acres of land drains into the two canals that flow into the lake."

Also in the fall, the parish will begin dredging the north end of the lake to speed up the restoration process.

A similar process was already done on the south end with engineers using the sediment that was removed from the lake's bottom to build a 16.5-acre containment dike island.

Thibaut said they won't build an island on the north end. Engineers are now trying to figure out where they'll dump the dredged material so they can get started on the project.

"We're trying to find an adjacent piece of property to pump the silt to," he said.

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